



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,297	08/03/2005	Christopher James Lyddon	05-629	8152
20/306 7590 06/03/2010 MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP 300 S. WACKER DRIVE 32ND FLOOR CHICAGO, IL 60606				
EXAMINER				
ADDIE, RAYMOND W				
ART UNIT		PAPER NUMBER		
3671				
MAIL DATE		DELIVERY MODE		
06/03/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/544,297

Applicant(s)

LYDDON ET AL.

Examiner

Raymond W. Addie

Art Unit

3671

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-17 and 22-31 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 8/3/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the pre-brief conference request filed on 2/2/2010, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options: (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or, (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Thomas B Will/

Supervisory Patent Examiner, Art Unit 3671

Drawings

2. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In this case: Claim 3 recites "said barbs comprise a plurality of flat triangular side faces separated by frustoconical side faces".

Although Figs. 4-6 appear to be the best illustrations of the claimed embodiment, none of the figures appear to illustrate "frustoconical side faces".

Claim Objections

3. Claim 13 is objected to because of the following informalities: in line 6, the phrase "and attaching retainers"; should be --and then attaching retainers--. In order to clarify the sequence of method steps being performed. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-16, 22, 24, 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13, In. 4 recites the phrase "taking a net" it is indefinite as to whether "the net" recited in line 4, is the same net recited in lines 2-3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 10, 12, 17, 23, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton et al. US 6,409,420 B1 in view of Uotila US 5,310,277.

Horton et al. discloses a vehicle arresting net (22) that, in use, lies flat on the ground in the path of a target vehicle. The net comprising:

One or more transverse rows of spikes (51), disposed across a leading portion of said net. See Figs. 8-11.

Wherein when the tires of said vehicle run over said leading portion, one or more of said spikes (52) become embedded in at least one tire, and the net becomes wrapped around the wheels of the vehicle. Such that the portion of the net (22) between the wheels of the vehicle is pulled tight under the vehicle, thereby preventing further rotation of the wheels. Wherein the net is made of a flexible material, and hence, it capable of substantial elongation, without breaking. See Col. 3.

Although Horton et al. discloses the net is made of longitudinal and transverse cables (26, 28), forming square shaped loops there between, what Horton et al. does not disclose is forming loops that are longer in the longitudinal dimension, than in the transverse direction. However, Uotila discloses a vehicle capture net (1) made of a flexible material that wraps around the vehicle. The net (1) having warp elements (9) forming mesh-like openings (10). Wherein the mesh openings can be either square or rhombus, oriented in a diamond-like orientation. And are sized in the fore-aft direction to be consistent with the size of a vehicle tire. See Col. 7, ln. 57- Col. 8, ln. 13. Uotila also illustrates in Fig. 8 that the dimension of the rhombus is longer in the fore-aft direction than in the transverse direction.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide vehicle capture net of Horton et al., with

rhombus shaped openings, having a size consistent with the size of the vehicle tires, intended to be captured, as taught by Uotila, in order to facilitate wrapping the net around the axle(s) of the vehicle.

With respect to claims 2, 4, 5 Horton et al. discloses the tire spike (52) includes spike assembly, having a base portion (58), a shaft (51) a generally pyramidal barb (59) that is undercut (60) at the base of the pyramid. See Fig. 3.

With respect to claims 10, 12, 23, 29 Horton et al. discloses the spike assemblies (52) are attached to the net, such that the material of the net encircles the base portions of said assemblies. See Fig. 3. And that the net is formed into a plurality of widthwise sections at said leading portion thereof. See Col. 3, lns. 20-50. Horton et al. clearly discloses the spikes are coupled to the intersection points (30, 32, 34, 36, 38 and 40) of the net mesh. Although the net material does not directly encircle the shaft portion of the spikes, the net material encircles the base, upon which the shaft is centered, and therefore, also encircles the shaft, thereby preventing the spikes from being removed from the net. Hence, it would have been an obvious design choice between coupling the net to the shaft (51) or the base (58), with no apparent difference in the effect or functioning of the vehicle capture net. Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to position the net intersections above the base of the spikes, in order to secure the net to the tire, having the embedded spike therein.

With respect to claims 17, 28, 30 Horton et al. in view of Uotila disclose a method of arresting a vehicle comprising:

Laying a vehicle capture net, as cited above, with respect to claim 1; on a ground or roadway, in the path of a target vehicle. Such that when the tires of the vehicle run over the leading portion of the net, one or more of tire spikes (52) become embedded in said tires. Wherein the net becomes wrapped around the at least the front tires of said vehicle, such that the portion of the net between the tires is pulled tight under the vehicle thereby preventing further rotation of said wheels. See Figs. 8-11.

With respect to claims 26-27 Horton et al. discloses the spikes are coupled to the intersection points (30, 32, 34, 36, 38 and 40) of the net mesh, but does not disclose what method steps are used in the coupling. However, it would have been well within the skill of one in the art to couple the spike assemblies (52) to the net intersections, by penetrating the intersections, (30, 32, 34, 36, 38 and 40) of the net mesh, with the spikes, such that the material of the net encircles the shaft of the spike. Since doing so only requires routine skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to couple the spike assemblies to the net intersections, as disclosed by Horton et al., by penetrating the tips of the spikes through the net intersections, in order to cause the net to be trapped between the vehicle tire and the base of the spike.

With respect to claim 31 Horton et al. discloses the net is made of longitudinal and transverse cables (26, 28), forming square shaped loops therebetween, the loops being oriented in a diamond-like shape.

What Horton et al. does not disclose forming loops that are longer in the longitudinal dimension, than in the transverse direction.

However, Uotila discloses a vehicle capture net (1) made of a flexible material that wraps around the vehicle. The net (1) having warp elements (9) forming mesh-like openings (10). Wherein, the mesh openings can be either square or rhombus, oriented in a diamond-like orientation. And are sized in the fore-aft direction to be consistent with the size of a vehicle tire. See Col. 7, ln. 57-Col. 8, ln. 13. Uotila also illustrates in Fig. 8 that the dimension of the rhombus is longer in the fore-aft direction than in the transverse direction. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide vehicle capture net of Horton et al., with rhombus shaped openings, having a size consistent with the size of the vehicle tires, intended to be captured, as taught by Uotila, in order to facilitate wrapping the net around the axle(s) of the vehicle.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horton et al. US 6,409,420 B1 in view of Uotila US 5,310,277 as applied to claim 2 above, and further in view of Marphetia. # 6,312,189 B1.

Horton et al. in view of Uotila disclose essentially all that is claimed, with respect to claim 1 above, but does not disclose the use tire puncturing spikes having triangular and frusto-conical side faces. However, Marphetia teaches a unique tire deflating spike having a generally pyramid barb, having a plurality of flat triangular side faces,

separated by a frustoconical side faces, wherein the barbs are undercut at their bases (11). The barb forming an air passage (18, 13) to maximize deflation rate of the tire thus punctured. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the vehicle arresting device of Horton et al. in view of Uotila with pyramid shaped barbs, as taught by Marphetia, in order to facilitate deflation of the vehicle tire(s). See Marphetia Cols. 3-4.

7. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton et al. US 6,409,420 B1 in view of Uotila US 5,310,277 as applied to claim 1 above, and further in view of Ousterhout et al. # 6,312,188 B1.

Horton et al. in view of Uotila disclose essentially all that is claimed, with respect to claim 1 above, but do not disclose the use reinforcement straps. However, Ousterhout et al. teaches the use of a plurality of elongate elements (750), as shown in Fig. 35, made of flexible material extending transversely of the net at spaced locations and attached to the net at its opposite side edges. Wherein the one or more elongate elements (750) are threaded through loops of the net but more positively attached to the net at said side edges, via the use of separable hook and loop or similar material (738,

752, 756, 744, 745). See col. 13, ln. 40-col. 14, ln. 45. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the vehicle capture net of Horton et al. in view of Uotila with reinforcement straps, as taught by Ousterhout et al., in order to increase the strength of the net.

Allowable Subject Matter

8. Claims 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 13-16, 22, 24, 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond W. Addie whose telephone number is 571 272-6986. The examiner can normally be reached on 7am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571 272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Raymond W. Addie/
Primary Examiner, Art Unit 3671

5/26/2010